240 County Road Ipswich, MA 01938-2723 Tel 978-927-5054 Fax 978-921-1350

www.neb.com info@neb.com

## New England Biolabs Certificate of Analysis

Product Name: RsrII Catalog #: R0501S/L Concentration: 5,000 units/ml

Unit Definition: One unit is defined as the amount of enzyme required to digest 1 µg of Lambda DNA in 1 hour at 37°C in a total reaction

volume of 50  $\mu$ l.

*Lot* #: 0231710 10/2017 Assay Date: 10/2018 Expiration Date: *-20°C* Storage Temp:

Storage Conditions: 250 mM NaCl, 10 mM Tris-HCl (pH 7.4), 1 mM DTT, 0.1 mM EDTA, 50% Glycerol, 0.15% Triton X-100, 200 µg/ml

BSA

Specification Version: PS-R0501S/L v1.0 Effective Date: 11 Jun 2013

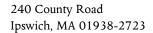
Assay Name/Specification (minimum release criteria)	Lot #0231710
Endonuclease Activity (Nicking) - A 50 $\mu$ l reaction in CutSmart <sup>TM</sup> Buffer containing 1 $\mu$ g of supercoiled PhiX174 DNA and a minimum of 50 units of RsrII incubated for 4 hours at 37°C results in <10% conversion to the nicked form as determined by agarose gel electrophoresis.	Pass
<b>Exonuclease Activity (Radioactivity Release)</b> - A 50 $\mu$ l reaction in CutSmart <sup>TM</sup> Buffer containing 1 $\mu$ g of a mixture of single and double-stranded [ <sup>3</sup> H] <i>E. coli</i> DNA and a minimum of 50 units of RsrII incubated for 4 hours at 37°C releases <0.1% of the total radioactivity.	Pass
<b>Ligation and Recutting (Terminal Integrity)</b> - After a 10-fold over-digestion of Lambda DNA with RsrII, >95% of the DNA fragments can be ligated with T4 DNA ligase in 16 hours at 16°C. Of these ligated fragments, >95% can be recut with RsrII.	Pass
Non-Specific DNase Activity (16 Hour) - A 50 μl reaction in CutSmart <sup>TM</sup> Buffer containing 1 μg of Lambda DNA and a minimum of 50 Units of RsrII incubated for 16 hours at 37°C results in a DNA pattern free of detectable nuclease degradation as determined by agarose gel electrophoresis.	Pass
<b>Protein Purity Assay (SDS-PAGE)</b> - RsrII is ≥ 99% pure as determined by SDS-PAGE analysis using Coomassie Blue detection.	Pass

<sup>\*</sup> The BSA in this product has been granted an EDQM "Certificate of Suitability" from the European Directorate for the Quality of Medicines (#R1-CEP-2003-204-Rev00) and has been granted a USDA Certificate for Export of Bovine Blood Plasma/Serum for Manufacture into Pharmaceutical Products.

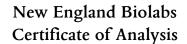








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Authorized by Derek Robinson 11 Jun 2013





NEW ENGLAND BioLabs Inc.



Inspected by Jianying Luo 16 Oct 2017